

Notice of Allowability

Application No.

10/797,381

Examiner

James D. Stein

Applicant(s)

KROPP, JORG-REINHARDT

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the telephone interview on 03/20/06.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 032006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


SUNG PAK
PRIMARY EXAMINER


James D. Stein
Patent Examiner, AU 2874

DETAILED ACTION

This Office Action is in response to the telephone interview on 03/20/06.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Thomas Eschweiler on 03/20/06.

The application has been amended as follows:

Claim 1 (currently amended): A bidirectional transmitting and receiving device, comprising: a transmitting area of a first size; a receiving component comprising a receiving area of a second size; and coupling optics configured to couple light between the transmitting component and the receiving component on the one hand, and an optical waveguide to be coupled thereto on the other hand, wherein the coupling optics comprise two imaging component comprising an emission systems that are arranged one behind the other such that the light that is emitted from the transmitting component is imaged by the first imaging system [on] **onto** an intermediate plane on which the receiving component is located, and in the process passes through the receiving component or passes by it at a side thereof, and wherein the second imaging system images firstly the light that is emitted by the transmitting component from the intermediate plane onto an end surface of the optical waveguide, and images secondly the light that is emitted by the optical waveguide onto a receiving area of the receiving component.

Claim 14 (currently amended): 14. A bidirectional optical system, comprising: a transmitting component comprising an emission area having a first area associated therewith; an optical waveguide having an end surface associated therewith facing the transmitting component; a receiving component disposed between the transmitting component and the optical waveguide, and comprising a receiving area having a second area associated therewith; a first imaging system disposed between the transmitting component and the receiving component, and configured so that light from the transmitting component is imaged [on] onto an intermediate plane at which the receiving component is located; and a second imaging system disposed between the optical waveguide and the receiving component, and configured to image emitted light from the transmitting component onto a portion of the end surface of the optical waveguide, and image light from the optical waveguide onto the receiving area of the receiving component.

The following is an examiner's statement of reasons for allowance: The Mueller and Jewell references of record to not teach a first imaging system between a transmitting component and a receiving component that functions so as to image light emitted by the transmitting component onto an intermediate plane on which the receiving component is located. Fig. 6a of Mueller and fig. 1 of the present invention illustrate the difference between the claimed invention and Mueller:

Fig. 6a

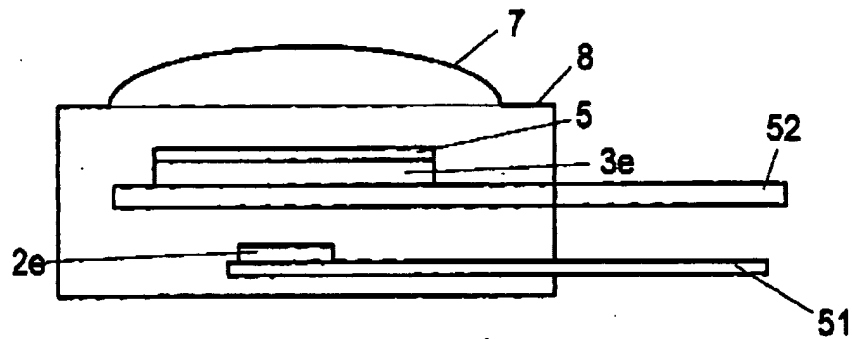
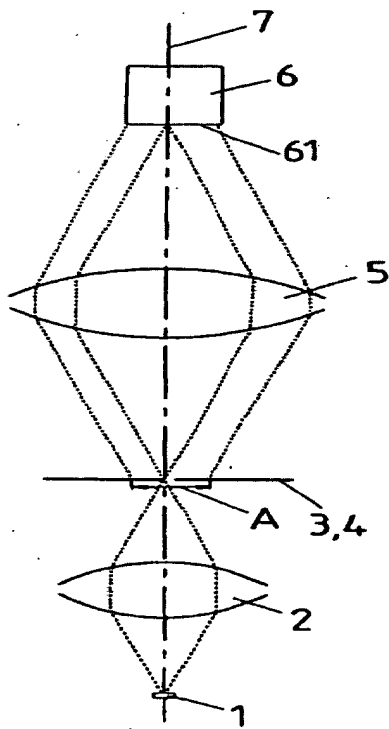


FIG 1



As can be seen from the figures, Muller does not show an additional imaging system 2 between the transmitter 1 and the receiving component 2 that functions so as to image light onto an intermediate plane 4 on which the receiving component 3 is located. One of ordinary skill in

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the art would not have found it obvious or have been motivated to modify Muller to include this feature, as Muller intends for all light emitted by the transmitting component 2e to reach the waveguide 6 (fig. 1 of Muller). By focusing light on the intermediate plane of Muller, the light would be substantially prevented from reaching -- and therefore, being coupled into -- the waveguide. Conversely, Muller shows that light emitted from the waveguide 6 is imaged on the receiving component. Applicant has provided a bi-directional optical communication device with improved imaging functionality over the prior art. For these reasons, the claimed invention is patentably distinct from the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

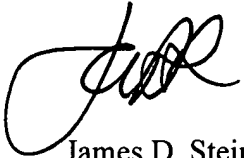
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Stein whose telephone number is (571) 272-2132. The examiner can normally be reached on M-F (8:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

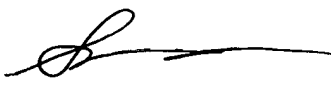
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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